

Satinitigan_HW1

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Homework 1 - Model Building and Model Selection/Fitting

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Building models

Deviant aggressive behavior

1. What social policy might be appropriate to reduce deviant aggressive behavior if Theory I were correct? Theory II? Theory III? Theory IV?

If Theory I were correct, the appropriate social policy is the enforcement of formal positive and negative sanctions. Individuals will be rewarded for good behavior through formal positive sanctions and they will be punished for bad behavior through formal negative sanctions. For example, jail time and fines are being imposed on citizens who engage in disturbing the peace. Individuals will then learn to avoid engaging in deviant aggressive behavior. If deviant aggressive behavior is learned from experience, then a consistent and predictable enforcement of these sanctions will lead to positive behavior as individuals learn the consequences of their actions. Cities that invest the proper resources in their police departments are then expected to have less instances of deviant aggressive behavior under this theory.

If Theory II were correct, the appropriate social policy is therapeutic social control where providers strive to return frustrated individuals to normality through the manipulation of symbolic systems. Because frustrated individuals are treated as having a disordered personality, this social policy acknowledges that their intentions and capacities to exercise free will are impaired. Through therapy, frustrated individuals will express their anger towards personal authority figures in non-aggressive behavior. In anger management therapy for example, the goal is to move a person from unhealthy expressions of anger to healthy manifestations. Instead of expressing anger in aggressive, passive-aggressive, or suppressive expressions, individuals will learn to assertively communicate their anger. We can expect a reduction in socially deviant aggressive behavior because individuals can better manage their anger and frustrations. Governments that expand access to mental health resources are therefore expected to have less instances of deviant aggressive behavior under Theory II.

If Theory III were correct, the appropriate social policy is participatory governance and citizen empowerment. Through this policy, people who are most hurt by the rules are given a voice and the power to change the rules so that they become more equitable and inclusive. Oppressed individuals are then equipped with the right tools so they can participate in redesigning the system that initially discriminated against them. People who take ownership of the system are more likely to conform to social rules. This will then lead to a reduction on deviant aggressive behavior among formerly oppressed groups. Otherwise, institutional racism and other oppressive systems will exacerbate inequality and inspire even more deviant aggressive behavior. Under this model, societies that allow for broader participation in the way they make laws or pass budgets are societies that have less people hurt by the rules.

If Theory IV were correct, the appropriate social policy is conciliatory social control with the deviant subculture. Through dialogue and trust-building exercises, the rest of society can restore harmony with the deviant subculture. A deeper understanding of the reasons for their deviance and for the traits that they exhibit will aid in reducing stigmatization against these traits. It may even lead to the incorporation of some of these traits into the mainstream. This will then reduce the potential of individuals socializing into deviant aggressive behavior. Therefore, governments that invest the right resources for social welfare and local social workers are expected to be better equipped at managing deviant subcultures under Theory IV.

Waiting until the last minute

- a. People often do things at the last minute because maybe they underestimate the time needed to accomplish the task. This may also mean that they overestimate the skills they have in accomplishing the same task thereby underestimating the time they need to succeed.
- b. People underestimate the time needed to accomplish the task, so they will do the task at the last minute.
- c. People may simply dislike certain tasks and avoid them until they have no choice and so they do things at the last minute.
- d. For model (b): (1) overconfident individuals (or those with extremely high core self-evaluations) will tend to do tasks at the last minute because they will most likely underestimate the time needed to accomplish the task relative to less confident individuals; (2) individuals who are new to the task at hand will overestimate the time needed to accomplish the task and so they will not do things at the last minute. For model (c): (1) people who have expressed the most affinity for the task at hand will least likely do things at the last minute; (2) people whose hobbies share the same skillsets as those that are needed to accomplish the task at hand will least likely do things at the last minute.

Selecting and fitting a model

Flexible versus inflexible method

- (a) We would generally expect the performance of a flexible statistical method to be better because the method will less likely overfit the extremely large sample size.
- (b) We would generally expect the performance of a flexible statistical method to be worse because the method will more likely overfit the small sample size.
- (c) We would generally expect the performance of a flexible statistical method to be better because the inflexible method will more likely find a linear relationship.
- (d) We would generally expect the performance of a flexible statistical method to be worse because it will more likely overfit the data.

Bias-variance

Each of the curves has the shape that it has because they represent varying orders of the polynomial curve. Curves with higher orders have more oscillation in them. The green line with an order of 1 is a straight line and the least flexible among the curves. The purple line with the highest order is the most flexible.